



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: **Stephen F. Smith et al.**
Serial No.: **10/726,446**
Filed: **December 3, 2003**
For: **MULTIDIMENSIONAL SIGNAL
MODULATION FOR HIGH DATA-
RATE TRANSMISSION**

Group Art Unit: **2121**
Examiner: **Unassigned**
Atty. Dkt. No. **UBAT1420**

**ASSOCIATE POWER OF ATTORNEY
FOR PATENT APPLICATION
Pursuant to 37 CFR 1.34**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

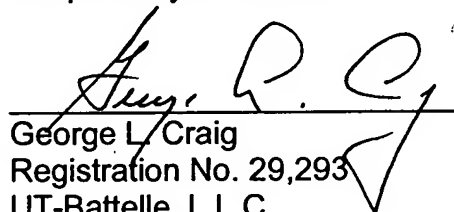
Pursuant to 37 CFR 1.34, I hereby appoint the registered practitioners assigned to **Customer No. 25094** including: Ari G. Akmal, Reg. No. 51,388, John L. Adair, Reg. No. 48,828; John J. Bruckner, Reg. No. 35,816; Steven R. Sprinkle, Reg. No. 40,825, each an attorney or agent of Gray Cary Ware and Freidenrich, L.L.P. to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith. (Assignee's agents are authorized to make corrections to this document).

Please direct all telephone calls to John Bruckner at (512) 457-7233. Please send all correspondence to:

**John J. Bruckner
Gray Cary Ware & Freidenrich, L.L.P.
1221 South MoPac Expressway, Suite 400
Austin, TX 78746-6875**

Date: 04-22-04

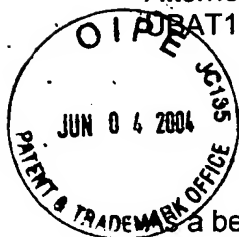
Respectfully submitted,


George L. Craig
Registration No. 29,293
UT-Battelle, L.L.C.
P.O. Box 2008
Oak Ridge, TN 37831-8243

PAT1420

1

COMBINED DECLARATION AND PRINCIPAL POWER OF ATTORNEY FOR PATENT APPLICATION



I, a below-named inventor, I (we) hereby declare that:

My (our) residence, post office address and citizenship, is (are) as stated below next to my (our) name;

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled:

MULTIDIMENSIONAL SIGNAL MODULATION FOR HIGH DATA-RATE TRANSMISSION

the specification of which

_____ is attached hereto.

 X was filed on **December 3, 2003** as Application No. **10/726,446**
and was amended on _____
(If Applicable)

I hereby state that I (we) have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment specifically referred to above.

I (we) acknowledge the duty to disclose all information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed.				
Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached? YES NO
Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto:				
I hereby claim the benefit under 35 U.S.C. 119(e) of any United States provisional application(s) listed below:				
Application Number(s)	Filing Date (MM/DD/YYYY)	<input type="checkbox"/> Additional provisional application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto		

I hereby claim the benefit under 35 U.S.C. 120 of any United States Application(s), or 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. Parent Application or PCT Parent Number	Parent Filing Date (MM/DD/YYYY)	Parent Patent Number (If applicable)

Additional U.S. or PCT international application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.

I (we) hereby appoint the following attorneys and/or patent agents to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

George L. Craig	Registration No. 29,293
Judson R. Hightower	Registration No. 26,603
Joseph A. Marasco	Registration No. 32,798
James M. Spicer	Registration No. 26,096
Shelly L. Stafford	Registration No. 38,623
Kirk A. Wilson	Registration No. 45,939

All of: UT-Battelle, LLC
P. O. Box 2009
Oak Ridge, Tennessee 37831-8243

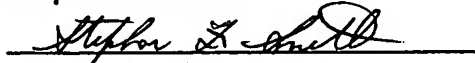
Please direct all correspondence and telephone calls to the individuals identified in the Associate Power of Attorney.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Name of First Inventor:

Stephen F. Smith

Signature:



Date:

28 April 2004

Citizenship:

USA

Residence Address:

550 Pickel Road
London, TN 37774

Name of **Second** Inventor:

William B. Dress

Signature:

Date:

Citizenship:

USA

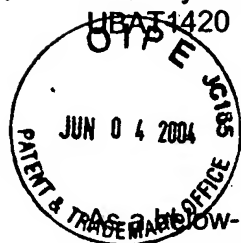
Residence Address:

1539 NW Lacamas Drive

Camas, WA 98607

UBAT1420

1



COMBINED DECLARATION AND PRINCIPAL POWER OF ATTORNEY FOR PATENT APPLICATION

As a below-named inventor, I (we) hereby declare that:

My (our) residence, post office address and citizenship, is (are) as stated below next to my (our) name;

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled:

MULTIDIMENSIONAL SIGNAL MODULATION FOR HIGH DATA-RATE TRANSMISSION

the specification of which

_____ is attached hereto.

X was filed on **December 3, 2003** as Application No. **10/726,446**
and was amended on _____
(If Applicable)

I hereby state that I (we) have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment specifically referred to above.

I (we) acknowledge the duty to disclose all information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?	
				YES	NO

Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto:

I hereby claim the benefit under 35 U.S.C. 119(e) of any United States provisional application(s) listed below:

Application Number(s)	Filing Date (MM/DD/YYYY)	<input type="checkbox"/> Additional provisional application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto

I hereby claim the benefit under 35 U.S.C. 120 of any United States Application(s), or 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. Parent Application or PCT Parent Number	Parent Filing Date (MM/DD/YYYY)	Parent Patent Number (If applicable)

Additional U.S. or PCT international application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.

I (we) hereby appoint the following attorneys and/or patent agents to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

George L. Craig	Registration No. 29,293
Judson R. Hightower	Registration No. 26,603
Joseph A. Marasco	Registration No. 32,798
James M. Spicer	Registration No. 26,096
Shelly L. Stafford	Registration No. 38,623
Kirk A. Wilson	Registration No. 45,939

All of: UT-Battelle, LLC
P. O. Box 2009
Oak Ridge, Tennessee 37831-8243

Please direct all correspondence and telephone calls to the individuals identified in the Associate Power of Attorney.

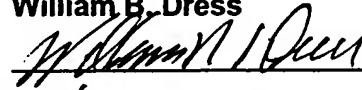
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Name of First Inventor:	Stephen F. Smith
Signature:	_____
Date:	_____
Citizenship:	USA
Residence Address:	550 Pickel Road London, TN 37774

Name of **Second** Inventor:

William B. Dress

Signature:



Date:

April 27, 2009

Citizenship:

USA

Residence Address:

**1539 NW Lacamas Drive
Camas, WA 98607**